

REMARKS

Claims 1-26 and 57-64 are pending in this Application.

Applicants appreciate the Examiner's indication that the Abstract submitted on 21 April 2006 overcomes the objections. We also appreciate withdrawal of the drawing objections set forth in the previous Office Action.

The Examiner has objected to claims 60, 61, 63 and 64 under 37 C.F.R. §1.75 as being a substantial duplicate of claims 57 and 58, arguing that these claims are duplicates or else are so close in content that they both cover the same thing, despite a difference in wording.

The Examiner has rejected claim 62 under 35 U.S.C. §101 as directed to non-statutory subject matter.

The Examiner has rejected claim 59 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner has rejected claims 1-15, 18-21, 23-26, 59 and 62 under 35 U.S.C. §102(b) as being anticipated by Fields et al. (US 5,459,656).

The Examiner has rejected claims 16 and 17 under 35 U.S.C. §103(a) as being unpatentable over Fields et al. (US 5,459,656).

The Examiner has rejected claims 21 and 22 under 35 U.S.C. §103(a) as being unpatentable over Fields et al. (US 5,459,656) in view of Crosswhite (US 6,611,726).

The Examiner has rejected claims 57, 58, 60, 61, 63 and 64 under 35 U.S.C. §103(a) as being unpatentable over Fields et al. (US 5,459,656) in view of Chavez et al. (US 6,684,193).

Rejection Under 35 U.S.C. § 101 of Claim 62

The Examiner rejects **claim 62** under 35 U.S.C. § 101 as directed to nonstatutory functional descriptive material. This rejection is not necessitated by any amendment, so finality of the office action is inappropriate.

MPEP 2106.01 provides, "When a computer program is recited in conjunction with a physical structure, such as a computer memory, USPTO personnel should treat the claim as a product claim." The PTO's position before the Federal Circuit, which produced binding precedent, has been "that computer programs embodied in a tangible

medium, such as floppy diskettes, are patentable subject matter under 35 U.S.C. § 101 and must be examined under 35 U.S.C. §§ 102 and 103." *In re Beauregard*, 53 F.3d 1583, 35 U.S.P.Q.2d (BNA) 1383 (Fed. Cir. 1995). Claim 62 specifies that the logic is impressed on a machine readable memory, which is a tangible medium, therefore satisfying section 101.

Applicants respectfully submit that the rejection of claim 62 under § 101 should be withdrawn.

Rejection Under 35 U.S.C. § 112 of Claim 59

The Examiner rejects **claim 59** under 35 U.S.C. § 112 as not reciting hardware and/or software elements that constitute a system. We have amended claim 59 to clearly recite a processor, memory, etc.

Applicants respectfully submit that the rejection of claims 59 under § 112 should be withdrawn.

Rejection Under 35 U.S.C. § 102(b) of Claims 1-15, 18-21, 23-26, 59 and 62

The Examiner rejects **claims 1-15, 18-21, 23-26, 59 and 62** under 35 U.S.C. § 102(b) as anticipated by Fields.

Claim 1

Claim 1 includes the limitations:

A computer-implemented method of adjusting projected demand for a plurality of items at one or more locations, including:

*calendarizing one or more disruptive events with associated impact estimates to apply to the items at the locations, wherein the disruptive events have a start date and are either open-ended or have a **distant end date** and an impact that is **appropriately modeled by a step impact** on sales history or projected demand; and*

applying the impact estimates, wherein

*the impact estimates for disruptive **events that already have taken place** are applied to sales history quantities used to project demand, and*

*the impact estimates for disruptive **events that have not yet take place** are applied to adjust the projected demand.*

These limitations are not found in Fields.

This claim includes calendarizing both past and future disruptive events, as separate descriptions are given in the applying step as to how to apply impact estimates

to past and to future disruptive events. It specifically applies to step impact disruptive events. The term "distant end date" means a date that is at or after the end of a planning cycle. *Applic.* at 4, line 22. These limitations are not found in Fields.

The Examiner argues (OA § 15 at 14) that Fields teaches end dates, without quite asserting that Fields teaches **distant** end dates that effectively are as far out as open ended events. The application teaches that distant end dates are nearly as far out as open ended events, analytically, when it specifies that the distant end date is as distant as the end of a planning cycle – remember that this type of program looks ahead and plans for the planning cycle.

Fields does not teach using end dates for specifying disruptive events, because Fields is a day-at-a-time system. Look for instance at Fields figure 2A, on which the Examiner relies. It illustrates curves that apply to Monday, Tuesday, etc. and predict intra-day sales as a percentage of the daily sales. Daily and intraday sales are repeatedly discussed, but not weekly, monthly or extended period sales. Intraday sales analysis better applies to baking cookies on-site (e.g., Mrs. Fields' cookies) than to fashion merchandising.

In the OA, at § 15, p. 14, the Examiner refers to having "explained above" that Fields taught end dates, but that was not actually explained on page 4, where the end date limitation first appears. The Examiner string cites various passages, without ever referring to a distant end date in the parenthetical explanation. Figure 2A, for instance, illustrates past business demand curves for particular items and particular prototypical days, e.g., Saturday, Thanksgiving and Christmas Eve. Figure 2A, therefore, does not read on a distant end date limitation. Column 3, lines 4-12, mention a start (not end) of a production task, in the context of producing goods such as cookies to be available at particular times of day. Column 3, line 60, to column 4, line 20, describes a day model as collecting several day-at-a-time curves "representing the percentages of total demand in each of a plurality of time intervals ... between the start and end times of the business day." This does not teach a distant end date. Column 4, lines 30-42, discusses overlaying multiple prototype intraday demand curves to create an accumulated curve, for instance addressing "a Saturday having a Promotional sale event." This does not teach a distant end date. Column 7, lines 54-57, refers to start and end times within a single day, which teaches away from a distant end date. Column

8, lines 11-20, calls on the user to "specify total sales and total customers for the business day as the desired projected values" from which an intraday production could be planned. This again teaches away from a distant end date. Column 9, lines 35-51, details that intraday demand can be tracked as sales figures, item counts or customer numbers, stored as percentages of the day's demand. Once more, this teaches away from an end date. We further note that none of the data structures in the appendix to which this passage refers include an end date. Finally, column 10, lines 10-15, admittedly talk about location specific curves, not about distant end dates. Having traversed each and every passage cited by the Examiner in the discussion (OA at 4) of the calendaring step, it is clear that Fields does not teach distant end dates or even end dates at all.

Fields does not teach calendaring disruptive events that are appropriately modeled by a step impact. The terms step impact and step function are used repeatedly in this application. See, e.g., p. 1, line 31; p. 2, line 1; p. 2, line 8; p. 4, lines 8, 9, 19, 20 and 24. The curves in Fields figure 2A are intended not to be step functions or to represent step impacts. All five curves for item demands are curly and non-convex. The Examiner's work in operations research gives her strong familiarity with the notion of a step impact or step function.

It is sophistry to argue (OA at 15) that the words of the claim are "step impact" not "step function", because that is a distinction without a difference and because the Examiner makes no effort to find a step impact anywhere in Fields. As to the use of "step function" in the application, interchangeably with "step impact", we trust that the Examiner has word search facilities available as a substitute for a cursory glance through the specification. We would be happy to provide the Examiner with a searchable version of the original specification, to avoid future misplaced criticism of language choices.

As for finding both past and future disruptive events in Fields, the Examiner's analysis at p. 4 misses the point. Using impact factors for the recent past to update intraday demand curves (*citing*, column 4, lines 60-67, column 8, lines 1-5, column 9, lines 1-15, and column 10, lines 50-67) is not what we claimed. Column 4, lines 60-67, teaches updating prototype intraday demand curves based on recent divergence between projected and actual intraday demand. This does not read on applying past

disruptive events to sales history quantities used to project demand between a start date and an open ended or distant end date. Moreover, because Field's updated intraday demand curves are stored as percentages of daily sales, they are dimensionless and are not sales history quantities (a point driven home by helping my son with his high school physics problems this morning.)

Fields does not teach enough to anticipate claim 1.

Therefore, claim 1 should be allowable over Fields.

Claim 2

Claim 2 includes the limitations:

The method of claim 1, wherein the impact estimates can be positive or negative.

These limitations are not found in Fields.

Fields expresses impact estimates in figure 2A, on which the Examiner relies, as percentages of daily sales. Fields does not teach any disruptive event that would produce returned goods at such a rate as to produce negative percentages of daily sales. The passage at column 6, lines 23-35, describe a user manually setting daily sales (of cookies, for instance) to a number that is high or lower than previous sales. Total values for a day are then processed against intraday demand curves to set hourly production goals. This does not read on impact estimates, as that term is used in claim 1, being negative.

Therefore, claim 2 should be allowable over Fields.

Claim 3

Claim 3 includes the limitations:

The method of claim 1, wherein the impact estimates are factors multiplied by the sales history quantities and the projected demand.

These limitations are not found in Fields.

Fields' intraday demand curves are multiplied by projected daily demands that appear (e.g., column 6, lines 23-35) to be manually entered. They are not multiplied by past sales history quantities, as specified by claim 1 when a past disruptive event is processed.

Therefore, claim 3 should be allowable over Fields.

Claim 4

Claim 4 includes the limitations:

The method of claim 1, wherein the impact estimates are quantities added to the sales history quantities or the projected demand.

These limitations are not found in Fields.

Fields' intraday demand curves must be multiplied by demand, because they are expressed as percentages. Dimensionless percentages cannot be added to quantities.

Therefore, claim 4 should be allowable over Fields.

Claim 5

Claim 5 includes the limitations:

The method of claim 1, wherein the impact estimates for disruptive events that already have taken place are factors multiplied by the sales history quantities.

These limitations are not found in Fields.

Again, Fields' intraday demand curves are not multiplied by past sales history quantities.

Therefore, claim 5 should be allowable over Fields.

Claim 6

Claim 6 includes the limitations:

The method of claim 1, wherein the impact estimates for disruptive events that already have taken place are quantities added to the sales history quantities.

These limitations are not found in Fields.

Again, Fields' intraday demand curves are applied to demand, not past sales history quantities. The demand curves must be multiplied by demand, because they are expressed as percentages. Dimensionless percentages cannot be added to quantities.

Therefore, claim 6 should be allowable over Fields.

Claims 7-13

Claims 7-13 should be allowable over Fields for at least the same reasons as claims 1, from which they depend.

Claim 14

Claim 14 includes the limitations:

The method of claim 9, wherein a plurality of impact estimates for the

plurality of disruptive events are combined additively.

These limitations are not found in Fields.

Fields' intraday demand curves must be combined multiplicatively, because they are expressed as percentages. Dimensionless percentages cannot be added together in any meaningful way.

Therefore, claim 14 should be allowable over Fields.

Claim 15

Claim 15 includes the limitations:

The method of claim 9, wherein a plurality of impact estimates for the plurality of disruptive events are combined by a combination of addition and multiplication.

These limitations are not found in Fields.

Fields' intraday demand curves can only be combined multiplicatively, because they are expressed as percentages. Dimensionless percentages cannot be added together in any meaningful way.

Therefore, claim 15 should be allowable over Fields.

Claims 18-20

Claims 18-20 should be allowable over Fields for at least the same reasons as claim 1, from which they depend.

Claims 23-26

Claim 23 includes the limitations:

The method of claim 1, evaluating an actual impact of least one particular disruptive event that has already taken place at least a predetermined period prior to adjustment of the projected demand, and adjusting the impact estimates based on the evaluated actual impact of the disruptive event.

The method of claim 23, wherein the predetermined period is user selected.

The method of claim 23, wherein the predetermined period is measured in days.

The method of claim 23, wherein the predetermined period is measured in time increment of less than a day.

These details are not anticipated by Fields.

Claim 23 teaches waiting a predetermined period after a disruptive event has happened, in order to have some historical perspective on its actual impact. What Fields teaches feels more like a rolling average (col. 4, lines 60-67; col. 6, lines 5-35). Fields certainly does not anticipate the detail called out by claims 23-26.

Therefore, claims 23-26 should be allowable over Fields.

Claims 59 and 62

Claims 59 and 62 should be allowable over Fields for at least the same reasons as claim 1, as claims 59 and 62 are device and *In re Beauregard* formulations of the basic method claim.

Rejection Under 35 U.S.C. § 103(a) of Claims 16-17

The Examiner rejects **claims 16-17** under 35 U.S.C. § 103(a) as unpatentable over Fields.

Claims 16-17 include the limitations:

The method of claim 9, wherein a plurality of impact estimates for the plurality of disruptive events are applied beginning with a most recent disruptive event.

* * *

The method of claim 9, wherein a plurality of impact estimates for the plurality of disruptive events are applied beginning with a most distant disruptive event.

These limitations are not found in Fields, which treats all demand curves as linear transforms that can be combined in any order without changing the result. Therefore, Fields does not teach ordering the application of impact estimates based on recency or distance of an event.

Therefore, claims 16-17 should be allowable over Fields.

Rejection Under 35 U.S.C. § 103(a) of Claims 21-22

The Examiner rejects **claims 21-22** under 35 U.S.C. § 103(a) as unpatentable over Fields in view of Crosswhite.

Claims 21-22 should be allowable over Fields in view of Crosswhite for at least the same reasons as claim 1, from which they depend.

Rejection Under 35 U.S.C. § 103(a) of Claims 57-58, 60-61 and 63-64

The Examiner rejects **claims 57-58, 60-61 and 63-64** under 35 U.S.C. § 103(a) as unpatentable over Fields in view of Chavez.

Claim 57

Claim 57 includes the limitations:

The method of claim 1, wherein the disruptive events represent cannibalization of sales or demand for a first item at a particular location by introduction of a second item at the particular location.

These limitations are not found in Fields in view of Chavez.

Combining Fields and Chavez without rendering Fields unsuitable for its intended purpose of scheduling intraday production of goods would still produce intraday demand curves stated as a percentage of whole day demand. Those dimensionless intraday demand curves are not capable of expressing cannibalization of demand for one product (e.g., semi-sweet chocolate chip cookies) by introduction of a second item at the same location (e.g., chocolate brownies.)

Moreover, an important part of the Examiner's *prima facie* burden is to explain why someone of ordinary skill would combine Fields and Chavez. *See, e.g., In re Kotzab*, 217 F.3d 1365, 1371, 55 U.S.P.Q.2D (BNA) 1313, 1317 (Fed. Cir. 2000) ("particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed"); *In re Rouffet*, 149 F.3d 1350, 1359, 47 U.S.P.Q.2D (BNA) 1453, 1459 (Fed. Cir. 1998) ("even when the level of skill in the art is high, the Board must identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination. In other words, the Board must explain the reasons one of ordinary skill in the art would have been motivated to select the references and to combine them to render the claimed invention obvious."); *In re Lee*, 277 F.3d 1338, 1343-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002) (quoting same).

First, no one of ordinary skill in the art would select Fields as a reference, because it deals with day-at-a-time production planning on an intraday demand basis, whereas modifying demand for disruptive events and particularly for cannibalization of demand resulting from new item introduction cannot begin to be addressed by any of Fields' techniques. Only by the use of hindsight could one even consider selecting

Fields as a primary reference, and the use of hindsight is impermissible. 5 *Chisum on Patents* § 5.03 [2][c] n. 29 (2005 Lexis version); e.g. *ATD Corp. v. Lydall, Inc.*, 159 F.3d 534, 546, 48 USPQ2d 1321, 1329 (Fed. Cir. 1998).

Second, no one of ordinary skill in the art would select as complicated an analytical approach as Chavez for a retail merchandising environment. Use of hyperplanes and multidimensional algebra require sophisticated parameter calibration that could not be practiced successfully in a retail environment.

Third, the mention of cannibalization in Chavez, contrary to the Examiner's assertions (OA at 13), does not readily translate from whole product lines, to which enormous planning resources can be directed, to particular items in particular stores. Both the practical considerations of having a simple approach for use in retailing and the mechanics of estimating parameters and conducting sensitivity analysis make it clear that Chavez could not be adapted to modify Fields' intraday demand curves. Applicants having offered a *prima facie* justification for NOT translating sophisticated hyperplane algebraic methods from whole product lines to bars of soap in a particular store, the burden now shifts back to the Examiner to submit an affidavit, subject to contradiction by experts, as to why she thinks that either Chavez's sophisticated mathematic treatment or Chavez's passing mention of cannibalization in a completely different context would render the claims obvious. MPEP § 2144.03.

Therefore, claim 57 should be allowable over Fields in view of Chavez.

Claim 58

Claim 58 includes the limitations:

The method 1, wherein the disruptive events represent opening or closing of a competing store that impacts sales or demand at the location.

These limitations are not found in Fields in view of Chavez.

By the Examiner's admission, neither of the references teaches the claimed element. It is pure hand waving and hindsight for the Examiner to declare that it would be obvious to do as claimed.

The fact that we all know that stores periodically close says nothing about modeling disruptive events. The fact that neither of the references that the Examiner has selected as the closest and most relevant to the claimed subject matter suggest, teach or motivate one of skill in the art to address opening or closing of competitive

stores is further evidence of nonobviousness. Applicants object to any notion that what is well known in the art (e.g., that stores close) would make it obvious to one of skill in the art to adapt either Fields or Chavez to read on claim 58. If the Examiner persists in arguing from whole cloth and most basic observations of ordinary life to the details claimed in claim 58, applicants are entitled do an Examiner's affidavit. MPEP § 2144.03.

Therefore, claim 58 should be allowable over Fields in view of Chavez.

Claims 60-61 and 63-64

Claims 60-61 and 63-64 include the limitations:

The method of claim 1, wherein the disruptive events represent cannibalization of sales or demand for a first item at a particular location by introduction of a second item at the particular location.

* * *

The method 1, wherein the disruptive events represent opening or closing of a competing store that impacts sales or demand at the location.

* * *

The method of claim 1, wherein the disruptive events represent cannibalization of sales or demand for a first item at a particular location by introduction of a second item at the particular location.

* * *

The method 1, wherein the disruptive events represent opening or closing of a competing store that impacts sales or demand at the location.

These limitations are not found in Fields in view of Chavez.

Claims 60-61 and 63-64 should be allowable over Fields in view of Chavez for at least the same reason as claims 57-58, which have similar limitations.

Applicants respectfully submit that claims 57-58, 60-61 and 63-64 should be allowable over Fields in view of Chavez.

CONCLUSION

Applicants respectfully submit that the pending claims are now in condition for allowance and thereby solicit acceptance of the claims as now stated.

Applicants would welcome an interview, if the Examiner is so inclined. The undersigned can ordinarily be reached at his office at (650) 712-0340 from 8:30 a.m. to 5:30 p.m. PST, Monday through Friday, and can be reached at his cell phone at (415) 902-6112 most other times.

Fee Authorization. The Commissioner is hereby authorized to charge any additional fee(s) determined to be due in connection with this communication, or credit any overpayment, to our Deposit Account No. 50-0869 (BLFR 1006-1).

Respectfully submitted,

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/Ernest J. Beffel, Jr./

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